

**ELV60**

V004-01-01B

SPECIFICATIONS

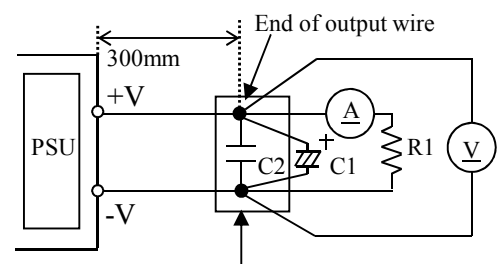
ITEMS		MODEL	ELV60-12-5R0	ELV60-24-2R5
1	Nominal Output Voltage	V	12	24
2	Minimum Output Current	A	0.2	0.2
3	Maximum Output Current	A	5	2.5
4	Maximum Output Power	W	60	60
5	Efficiency (Typ.) (*1)	100VAC	82	84
		200VAC	84	86
6	Input Voltage Range (*2)	-	90 - 305VAC (47Hz - 63Hz)	
7	Input Current (Typ.) (*1)	-	0.78A at 100VAC, 0.39A at 200VAC	
8	Inrush Current (Typ.) (*3)	-	25A at 100VAC, 50A at 200VAC, Ta = 25°C, Cold Start	
9	Harmonic Current	-	Designed to meet IEC61000-3-2 Class C (Load: 100VAC: ≥50%, 230VAC: ≥75%)	
10	Power Factor (Typ.) (*1)	-	0.98 at 100VAC, 0.93 at 200VAC	
11	Output Voltage Accuracy (*4,5)	-	±3%	
12	Total Regulation (*5)	-	±3%	
13	Output Ripple & Noise (*4,5)	mV	240	240
14	Over Current Protection (*6)	-	>105% Rated Output Power	
15	Over Voltage Protection (*7)	-	>110%	
16	Turn On Time (Typ.)	-	400 ms at 25°C	
17	Operating Temperature (*8)	-	-25 - +50°C	
18	IP Class (*9)	-	IP66	
19	Operating Humidity	-	15 - 90%RH (No Condensing)	
20	Storage Temperature	-	-30 - +85°C	
21	Storage Humidity	-	15 - 90%RH (No Condensing)	
22	Cooling	-	Convection Cooling	
23	Withstand Voltage (*10)	-	Input - (Output & FG) ... 3kVAC, for 1 min (10mA Max)	
24	Isolation Resistance	-	>100MΩ at 25°C and 70%RH. Output - FG : 500VDC	
25	Leakage Current (*11)	-	Less than 0.25mA. 0.05mA(Typ) at 100VAC / 0.1mA(Typ) at 200VAC	
26	Vibration	-	At no operating, 10 - 55Hz (Sweep for 1min) 19.6m/s <sup>2</sup> Constant, X,Y,Z 1hour each.	
27	Shock (In Package)	-	Less than 196.1m/s <sup>2</sup>	
28	EMI (Conducted & Radiated Emission)	-	Designed to meet EN55015 ; EN55022-B ; VCCI-B ; CISPR 22-B ; FCC-B	
29	Immunity	-	Designed to meet IEC61000-6-2 IEC61000-4-2, -3, -4, -5, -6, -8, -11	
30	Safety Standard	-	PSE mark (Den-an Appendix 8)	
		-	Designed to meet UL8750, EN61347-1, EN61347-2-13, EN62384	
31	Weight (Typ.)	g	830	
32	Size (L x W x H)	mm	L:228 (253 including mounting bracket) W:45.5 H:40.2	

\*Read instruction manual carefully, before using the power supply unit.

=NOTES=

- \*1 : At maximum output power , Ta = 25°C after warm up.
- \*2 : For cases where conformance to various safety specs (UL,Den-an,EN) are required, to be described as 100-240VAC (100-277V for USA), 50/60Hz on name plate.
- \*3 : Not applicable for the in-rush current to noise filter for less than 0.2ms.
- \*4 : At Vin=100/200VAC & maximum output power, Ta = 25°C.
- \*5 : Refer to Fig. A for measurement determination.
- \*6 : Current limiting with automatic recovery or shutdown. Avoid over load and short circuit.
- \*7 : OVP circuit will shutdown output, manual reset (Re-power on).
- \*8 : For cases where conformance to safety specs, operating case or ambient temperature will be specified. Please refer instruction manual.
- \*9 : Conditions : Please refer instruction manual.
- \*10 : Output and FG must be shorted together when testing. Otherwise PS will be spoiled.
- \*11 : Measured by measuring method of Den-an (at 60Hz), Ta=25°C.

**Figure A measurement setup**



Measurement point for output voltage, regulation and ripple & noise voltage. Measure with JEITA probe.  
 Bandwidth of oscilloscope : 20MHz  
 R1 = Electronic load  
 C1 = Elect. Cap. 100µF  
 C2 = Film Cap. 0.1µF

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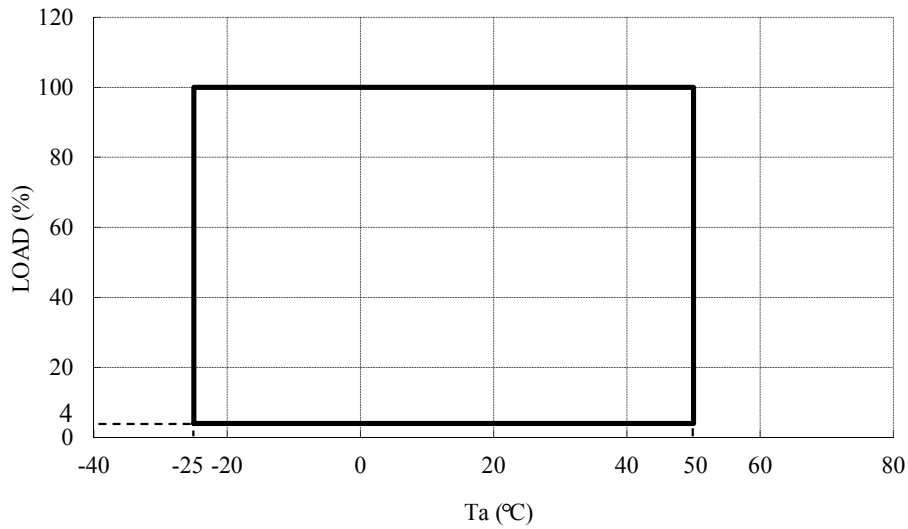
V004-01-02

OUTPUT DERATING

\*COOLING : CONVECTION COOLING

Derating Table	Ta (°C)	LOAD (%)
ELV60-12-5R0	-25 - +50	4 - 100
ELV60-24-2R5	-25 - +50	8 - 100

**ELV60-12-5R0** OUTPUT DERATING CURVE



**ELV60-24-2R5** OUTPUT DERATING CURVE

